

REMARKS

In response to the above Office Action, claim 1 has been amended to limit the claimed thermoplastic resin composition to one "consisting essentially of" the claimed components of the composition. The claim has also been amended to include in the composition other possible additives, namely, a barrier resin, (page 28, paragraph [0054]); a liquid rubber (Examples of Table 1 on page 57), a filler, a tackifier, an age inhibitor, a heat stabilizer, an antioxidant, a softening agent, a processing aid, an inorganic pigment, and an organic pigment (page 33, paragraph [0062]). Significantly, none of these additives include a vulcanizing agent or an accelerator for the rubber (B) of the composition.

New method claim 13 directed to a method for preparing a thermoplastic resin composition as a spacer or sealant of an insulating glass unit has been added. Support for the claim can be found in claim 1 and on pages 37 and 38, paragraph [0069] of the specification.

The essence of Applicants' invention lies in the fact that the composition includes "at least one kind of unvulcanized rubber (B) selected from the group consisting of a halogenated isoolefin/para-alkylstyrene copolymer and an ethylene propylene rubber." The composition is suitable for use in a spacer between two glass plates in an insulating glass unit. The advantages of using an unvulcanized rubber in which no vulcanizing agent or accelerator is present for forming such a spacer compared to one containing a vulcanized rubber is set forth in detail in the Reply filed May 26, 2009 from page 6, line 12 to page 7, line 4 and page 7, line 13 to page 9, last line. These remarks are incorporated herein by reference.

In the Office Action, the Examiner continued to reject claims 1-6, 8, 10 and 11 under 35 U.S.C. § 102(b) for being anticipated by Koizumi.

Even though Koizumi always ended up with a vulcanized rubber in the final thermoplastic elastomer composition disclosed, the Examiner argued that because claim 1 uses the transitional phrase “comprising” it is open to the inclusion of a crosslinker in the thermoplastic resin composition. Therefore it reads on the composition of Koizumi which also uses an unvulcanized rubber as a starting material.

In response, claim 1 has been amended to use the more restrictive transitional phrase “consisting essentially of.” Claim 1, therefore, now excludes the presence of any materials that would “affect the basis and novel characteristics” of the claimed invention. See M.P.E.P § 2111,03. Thus an activator or crosslinker which would vulcanize the unvulcanized rubber is now clearly excluded from the claim. Since all of claims 2 and 4-12 all depend directly or indirectly from claim 1, they now also all exclude the presence of an activator or crosslinker and thereby the presence of a vulcanized rubber.

Koizumi may disclose at an interim point in the described process a mixture of an unvulcanized rubber and a thermoplastic component (column 9, lines 25-30), but the reference also clearly teaches that “Thereafter a thermoplastic elastomer composition can be produced by adding a vulcanizing agent ... to dynamically crosslink the rubber composition (column 9, lines 30-33) and that the “composition of the present invention is prepared” from (not “is”) the unvulcanized rubber and the thermoplastic component (column 9, line 24 emphasis added). In other words, the “composition” of Koizumi comparable to the claimed “composition” always includes a vulcanized rubber.

In all of the Examples of Koizumi and in the claims the rubber is crosslinked or vulcanized. There is not the slightest teaching to one skilled in the art that the rubber should remain unvulcanized in the thermoplastic elastomer composition being described and claimed therein. Suggesting that perhaps it could be is not only taking the description in column 9, lines 25-30 of Koizumi out of context, but is clearly based on hindsight from a reading of Applicants' specification and not from anything even remotely taught by this reference.

As required by 35 U.S.C. § 102(b), for a reference to anticipate a claim, it is the "invention" being claimed that must be described in the reference. The claimed thermoplastic resin composition contains, inter alia, an "unvulcanized rubber" and it excludes the presence of a vulcanizer or accelerator. Koizumi does not describe such a thermoplastic elastomer composition. It only discloses a mixture initially containing an unvulcanized rubber to which an accelerator is always added in the preparation of a composition that always contains a crosslinked or vulcanized rubber. Accordingly, it is not seen how the claimed thermoplastic resin composition can be considered to be anticipated by Koizumi. Its withdrawal as a ground of rejection under § 102(b) of claim 1 and claims 2, 4-6, 8, 10 and 11 dependent therefrom is therefore requested.

Regarding claims 7, 9 and 12, since these also depend from claim 1, it is submitted they are not obvious over the combination of references cited against them for the reasons noted at the top of page 10 of the Reply of May 26, 2009.

Regarding new claim 13, it is submitted this is also not anticipated by Koizumi or obvious over Koizumi in view of Bowser because it specifically recites molding a pellet that contains an "unvulcanized rubber" into a spacer or sealant for an insulating glass

unit. In the cited references, taken alone or in combination, if any pellet is molded, it always contains a vulcanized rubber.

It is believed claims 1, 2 and 4-13 are in condition or allowance and such action is therefore requested.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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